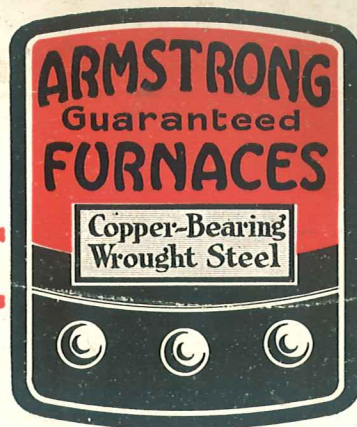


ARMSTRONG GUARANTEED FURNACES



The Armstrong Furnace
Company, *LONDON, OHIO.*





THIS catalog gives you the plain facts about a thoroughly dependable heating plant—the Armstrong Guaranteed Furnace, built of copper-bearing fire-box plate and **Armco Iron**—that has been successfully installed in all parts of the country and found satisfactory by many expert Furnace Dealers and Engineers. In addition to its original fine features we now not only cold rivet the seams in the drum, but thoroughly **weld** them—making the drums absolutely **smoke, gas and fume tight**—and especially adapted for burning **oil or gas** under pressure. This was original with us.

The manufacturers of motorized oil burners have decided that only a **welded** seam is fume tight—therefore the Armstrong is highly recommended by them. See illustration below.

With all of its improvements and correct design the Armstrong does not cost any more than many jointed cast furnaces and progressive dealers can, therefore, install it and meet all worthwhile competition.

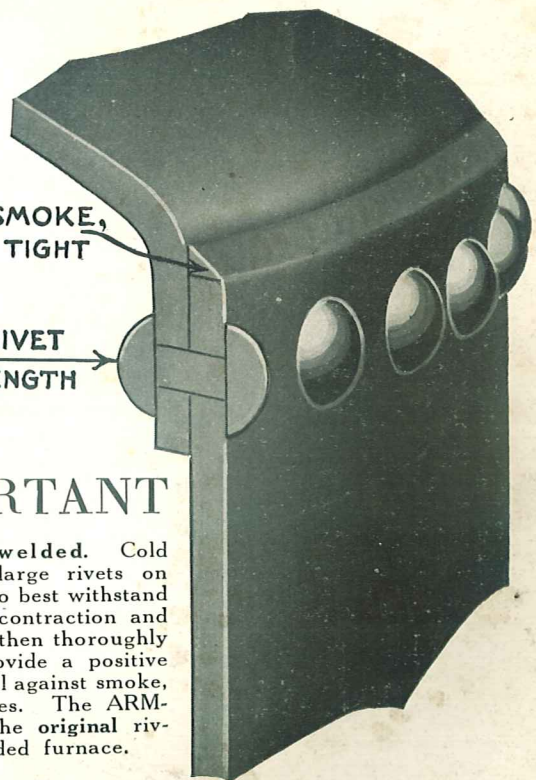
The Armstrong has the self-cleaning open dome, the extra deep fire pot, great heating and reflecting surfaces—all the usual good points and in addition, extra long fire travel and the most responsive radiator in the world. An ideal combination for live dealers.

**WELDED-SMOKE,
GAS AND FUME TIGHT**

**3/8" COLD RIVET
FOR STRENGTH**

IMPORTANT

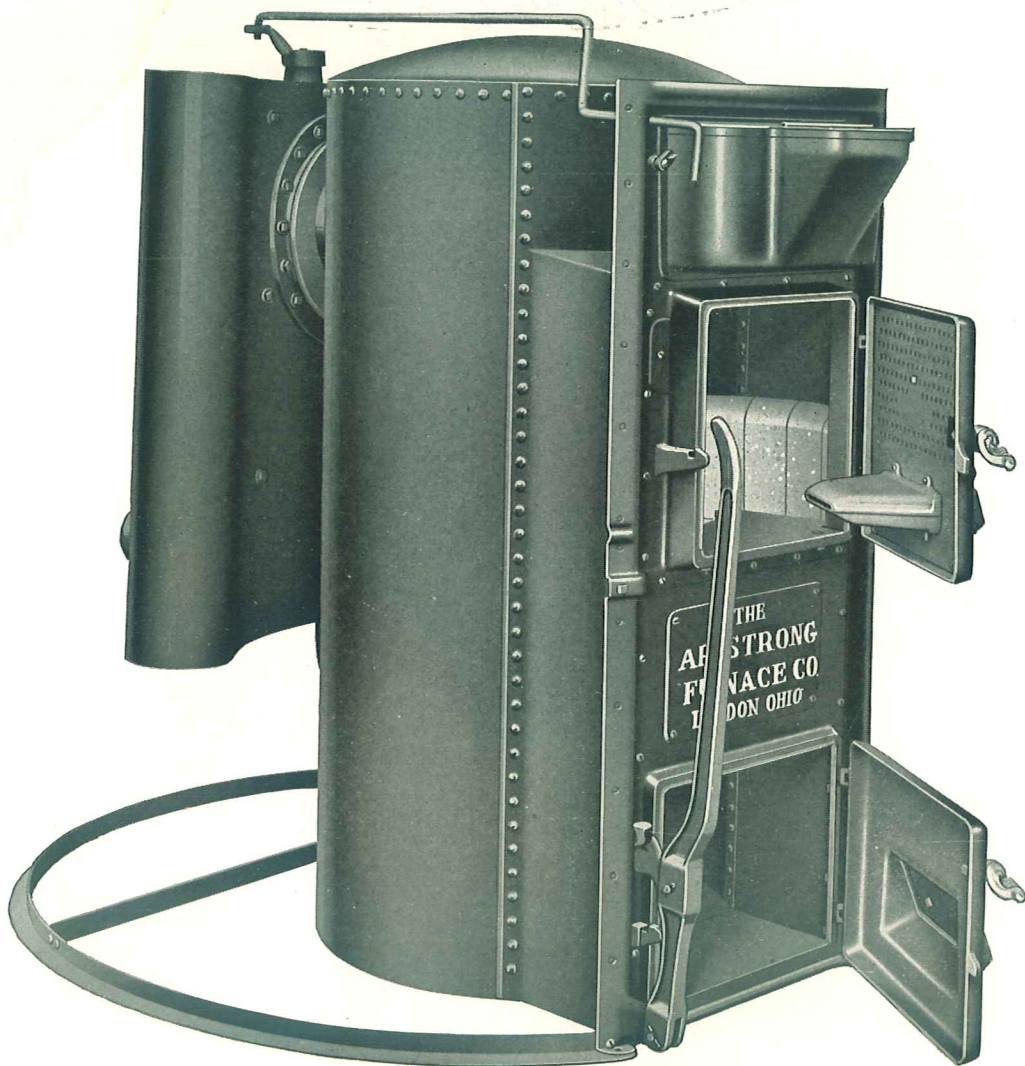
Riveted and welded. Cold riveted with large rivets on 1 1/4" centers to best withstand the strain of contraction and expansion — then thoroughly welded to provide a positive and lasting seal against smoke, dust and fumes. The **ARMSTRONG** is the original riveted and welded furnace.



The Armstrong Furnace Company
London, Ohio



ARMSTRONG GUARANTEED FURNACES



A Sturdy, Efficient Furnace—Built for Long Service

Cold Riveted and Welded
Smoke, Gas and Fume Tight
Best for Oil or Gas as well as Coal



The Armstrong is a Quality Furnace—Correctly Designed and Honestly Built

A good job begins with a good furnace—and the Armstrong looks the part, and is.

The Armstrong's sturdy appearance and outstanding modern features instantly win the good opinion of prospective buyers, and this gives the dealer a decided advantage in his effort to sell a **quality job at the profit to which he is entitled.**

The Armstrong has all of the good features of construction that have withstood the acid test of many years of use and abuse—plus modern improvements in touch with scientific research and up-to-date sanitation and convenience.

It is a **quick action heater—responsive—flexible—economical—correctly proportioned.** Not an ounce of cement is used in its assembly—but it is **cold riveted and welded into practically one piece and sealed absolutely gas, smoke and fume tight.**

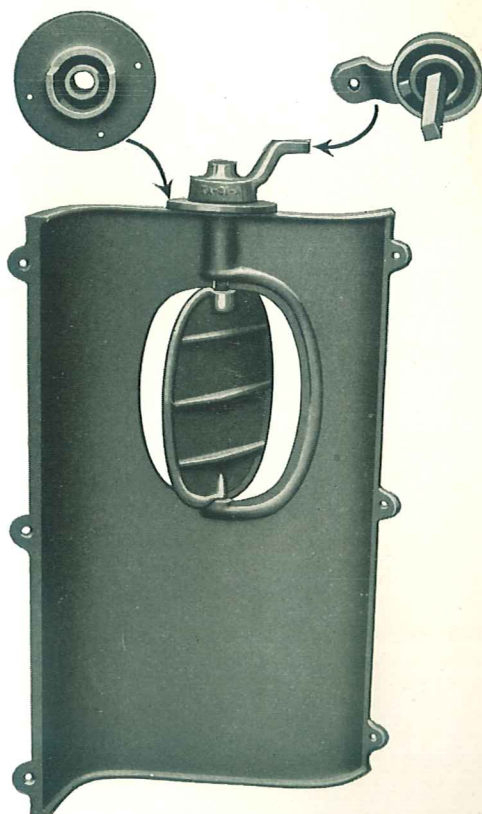
Improved baffle plate and reinforced damper are new features of an **Armco Iron** radiator that supplies extra long fire travel in contact with the most responsive metal in the world and enables the Armstrong to declare extra dividends of heat on every bucket of coal used.

(See accompanying illustration.)

A Quick Action Heating Plant. Easy to Install—Easy to Operate—Very Economical

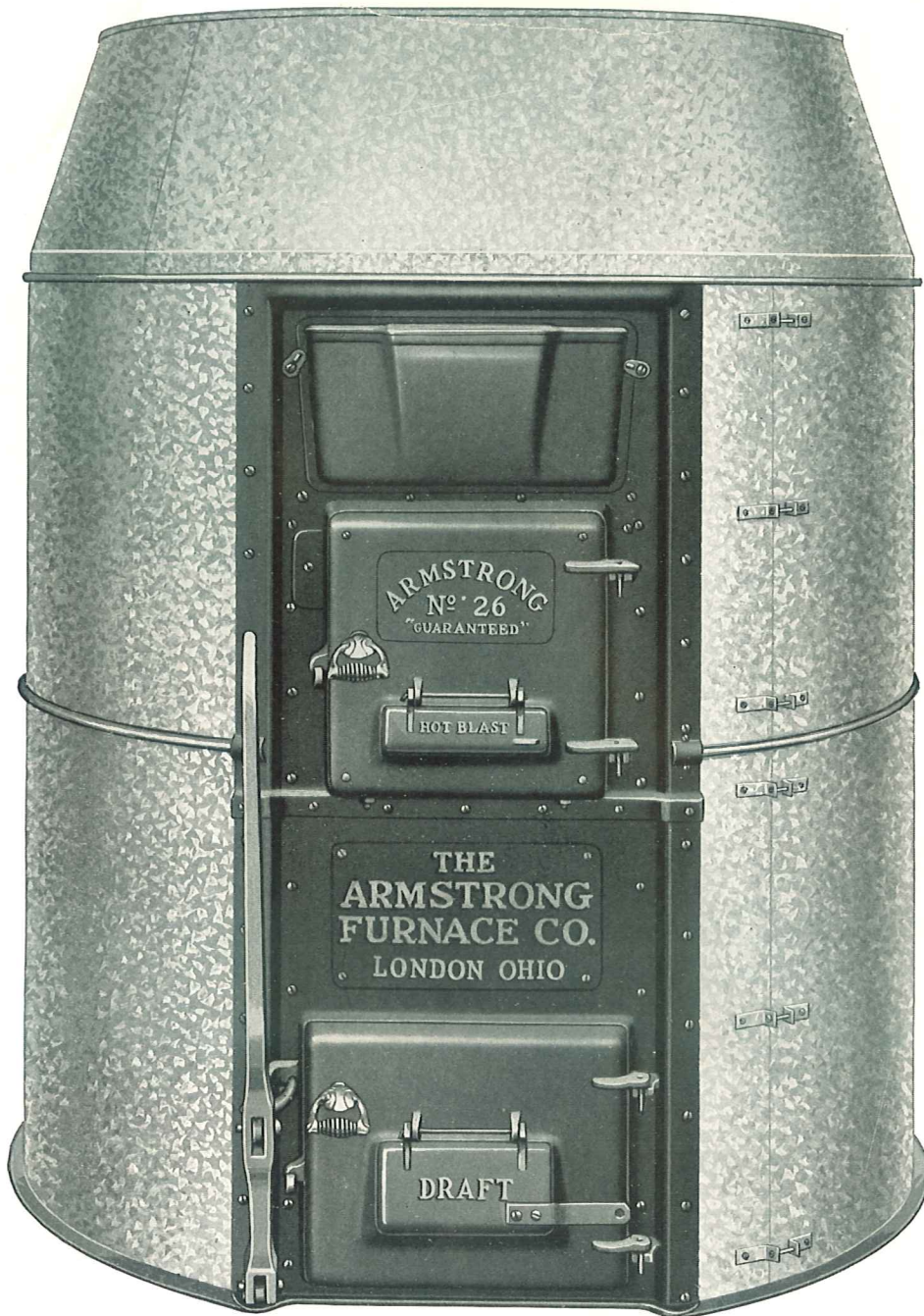
We sincerely believe that the Armstrong represents the very highest development in the warm-air heating industry as some of its features are being extensively copied by old established manufacturers. By that we do not mean that it offers any startling innovations. On the contrary, it is a furnace of conservative design, built strictly in accordance with the most modern ideas of scientifically correct heating and ventilation. It has no "trick" features—no half-tested ideas worked out as possible "talking points." Above all things, **the Armstrong is a practical furnace—easy to install—easy to operate—extremely economical of fuel—and absolutely dependable for thoroughly satisfactory heating results under any and all conditions.** When the call comes for heat in a hurry in the chilly days of Spring or Fall the Armstrong proves its outstanding superiority as a **quick-action heating plant.** Likewise, during solid weeks of bitter cold winter weather, the Armstrong can be depended upon to stay on the job and deliver an ample volume of pure, fresh, perfectly humidified warm air 24 hours a day if need be, without undue forcing and at bedrock cost for fuel.

Steel is the answer! The Armstrong can be relied upon for exceptional performance records, together with unusually low repair costs, because of scientifically correct design and boiler plate construction. Built of copper-bearing fire-box plate, cold riveted and welded into what is in reality a one-piece job, the Armstrong offers—at a very moderate price—a combination of heating plant advantages worthy of the most careful consideration of architects, home owners and furnace dealers.





ARMSTRONG GUARANTEED FURNACES



Extra Large Casings—Well Insulated to Depth of 36";
Prevent Waste of Heat in Basement;

Provide Large Volume of Warm, Balmy Air;
Protect Furnace Against Its Own Intense Heat.
Casings Furnished with Either Straight or Pitched Cap.



Why Boiler Plate is the Best Material for a Heating Plant

Steel is as responsive to heat waves as the radio is to sound waves. The Armstrong dome and radiator will radiate heat at least three times faster than ordinary cast iron radiators and will take the chill from a home in the morning in much less time and with the least amount of fuel. This means a great saving and convenience all thru the Spring and Fall.

Steel is fine, dense and polished—whereas even the best grades of cast iron are coarse and often porous.

The polished surface of the Steel acts as a reflector and an intense heat is quickly generated in the dome.

The United States Bureau of Standards has shown by scientific tests that Steel has much greater conductivity of heat than cast iron of equal thickness. Besides, the smooth, close-grained nature of the Steel and its consequent flexibility permits of it being formed into drums without liability of cracking or opening pores and also permits of very close and exact cold riveting of the seams. Instead of a number of joints that depend on stove putty or cement to keep them tight and protect the living rooms from noxious gases, smoke and dirt, the Armstrong has but one joint and that is, an absolutely leak-proof gasket sleeve that is of socket type—overlapped almost two inches and packed with heavy asbestos.

Smoke—Gas and Fume Tight

The seams of the Armstrong drum are first, cold riveted on $1\frac{1}{4}$ " centers with $\frac{3}{8}$ " x 1" rivets driven cold under immense pressure and are then thoroly **welded** by experts so that they are absolutely sealed against the escape of smoke, gas or fumes and are especially safe for use of oil or gas under pressure. This safeguard is very necessary with the growing popularity of oil burners with motor atomizers which project flames under immense pressure.

Why Fire Brick Makes the Best Furnace Fire Pot

The high grade fire bricks used in the Armstrong will withstand 800 to 1000 degrees greater heat than will cast iron. Furthermore, they will radiate heat as readily as cast iron to the dome and outer surfaces and the "core" or middle portion will **hold internal** heat for **many hours**.

They are of the same high grade as the refractory brick used for lining giant blast furnaces and are made to fit the exact radius of the furnace drum.

They are easily replaced thru the feed door without tearing down the casing and save the expense of costly cast iron repairs and the aggravation of trying to fit them to other castings that are warped and distorted out of radius.



ARMSTRONG GUARANTEED FURNACES

1.—Heavy Double Casing—easily set up by **one man**. Has metal insulated lining with 1" air space and to a depth of 36".

2.—Casing large—will move great volume of comfortable warm air instead of forcing hot air or overheating the basement.

3.—Radiator extra large—providing long fire travel in contact with very best radiating surfaces. Absolutely gas and smoke tight.

4.—Ribbed Heavy Damper—smoke and gas tight—makes it easy to start a **quick** fire with direct draft and warm the chimney. It is easily reversed to indirect draft, which provides extra long fire travel. Control rod comes through cast front—cannot be overlooked by operator.

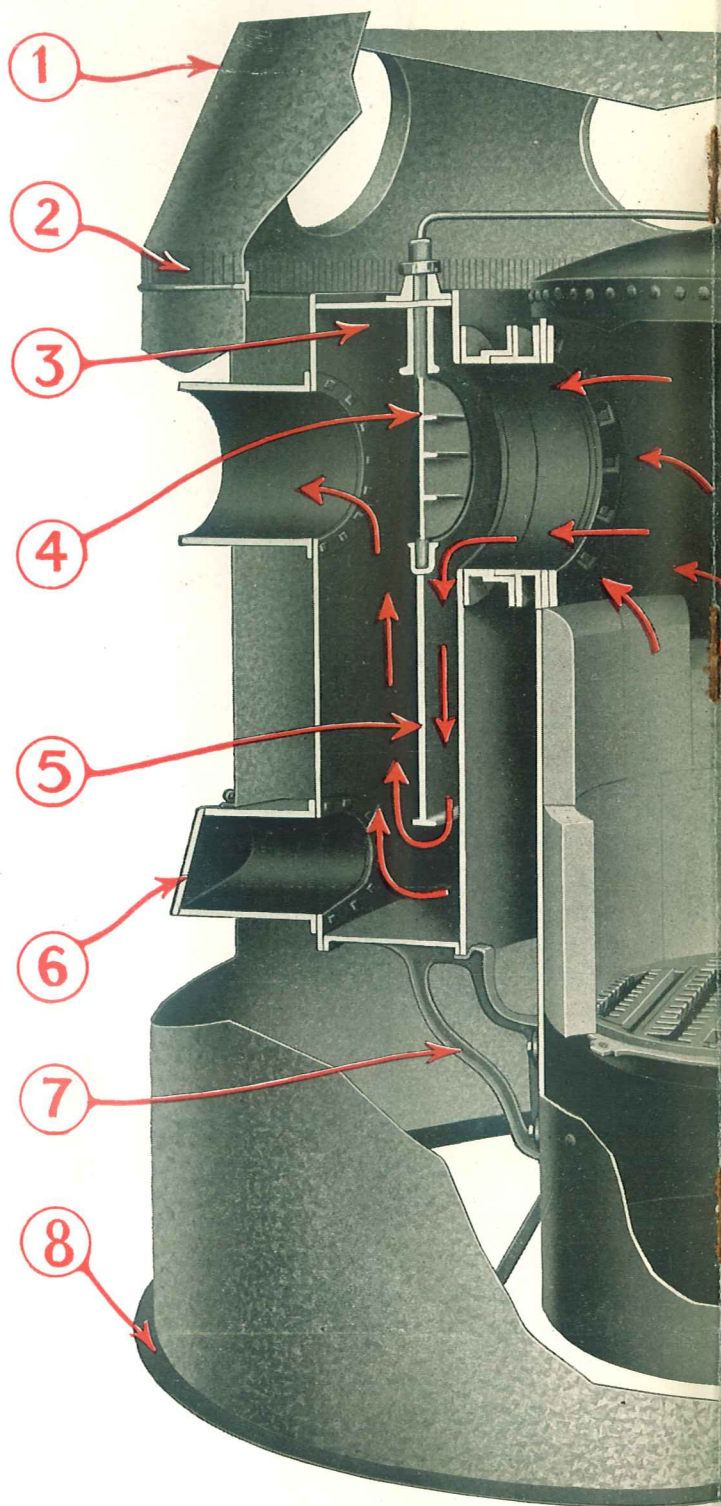
5.—Heavy Cast Baffle Plate in radiator arranged to provide longest and **most natural** fire travel through extra large, one piece smoke collar that is flanged on the **inside** as well as outside of the drum, and has a gas tight sleeve connection with radiator, packed with asbestos gasket.

6.—Cleanout is large—making it easy to reach all inner surfaces—and has a self closing hinged cover. Made in one piece.

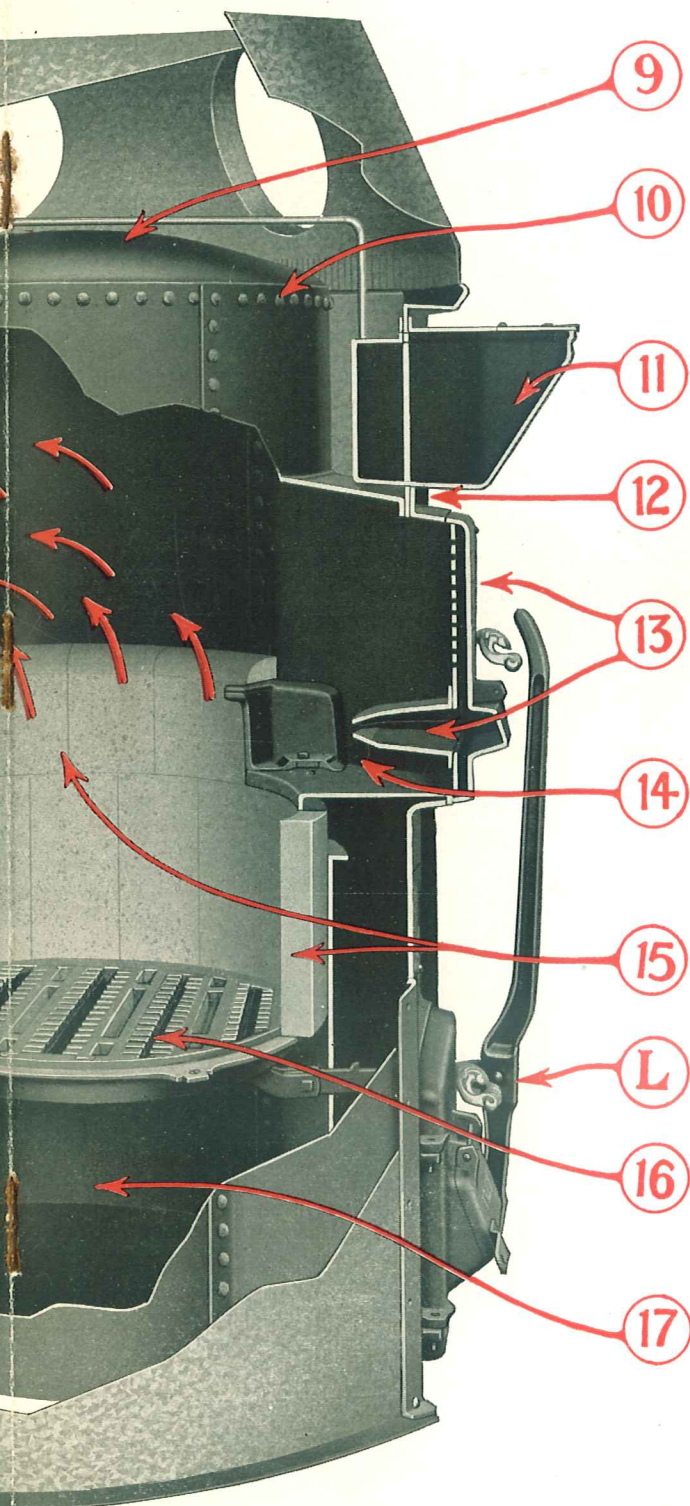
7.—Radiator is supported by a heavy bracket that keeps it always straight and relieves weight on collar connection.

8.—Heavy Non-Breakable One-Piece Base Ring—easy to level. Has strong cross brace that bolts to shell—and deep flange to support casing. It is shipped well crated.

9.—Heavy Pressed Head—correctly dished.



COPPER-BEARING WROUGHT STEEL



10.—“Copper Bearing Fire Box Plate” drum— $\frac{3}{16}$ ” thick—sealed tight with $\frac{3}{8}$ ” cold driven rivets on $1\frac{1}{4}$ ” centers, and seams thoroughly welded so that they are smoke, gas and fume tight. Built the proper height to allow good elevation of warm air pipes.

11.—Large Cast Water Pan—Properly located—easy to fill—impossible to overlook. Held securely in place by two substantial lugs. (Provided with automatic float when desired—at small extra cost.)

12.—Substantial Cast Front—easy to keep clean—attractive in design—aluminized so it will not rust.

13.—Large Feed Door—13” x 13”—provided with good smoke curtain and hot blast smoke carburetor working in unison with draft door. This is a real selling feature. Furnished as regular equipment. It saves coal.

14.—One Piece Cast Feed Pouch—providing extra deep fire pot. Has heavy cast clamps to hold top row of fire brick in place.

15.—Highest Test Fire Brick Lining. Will radiate heat better and longer than heavy castings. Just thick enough to protect the drum without causing undue insulation. Easily replaced at small expense without disturbing casing or furnace. Extra high brick in back to protect drum and smoke collar flange.

L.—The grates are operated by a strong upright lever that easily shakes or dumps and has an ingenious locking device which prevents throwing bars too far open while shaking. No ashes, dirt or smoke in the face of the operator or in the living rooms. When lever is in natural position the grate bars are level.

16.—Heavy Grate Bars—with mesh adapted to most grades of coal. Easy to seat or remove; have very few parts.

17.—Large Ash Pit—deep clearance—smooth bottom—no step-ups or rivet heads to interfere with the removal of ashes. Has large, tight fitting door with non-burn handle.



ARMSTRONG GUARANTEED FURNACES

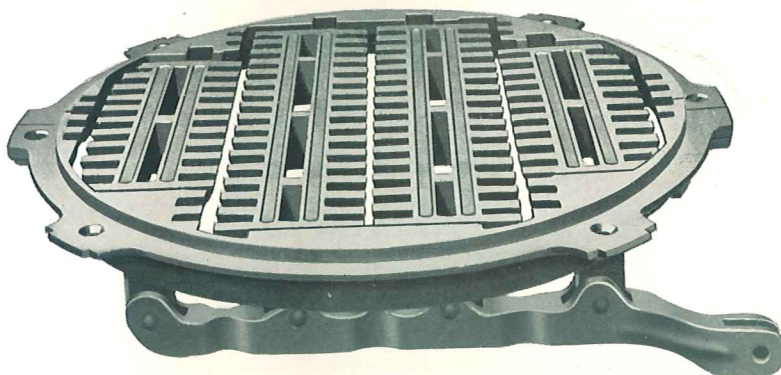
Armstrong Heat is Balmy, Healthful Heat

Parched throats, colds and headaches are often the result of breathing the hot, dry air of steam-heated homes. Furthermore, furniture dries out and opens up at the joints in homes where there is not moistened heat.

The Armstrong Furnace is equipped with an extra large water pan that is located in the upper front where it cannot be overlooked but is very accessible and easy to fill. (If desired, it is provided with float for connection with the water service.) Its vapors saturate and purify the air in the canopy and greatly add to its heating efficiency—saving coal and money and protecting health.

The Armstrong Grate

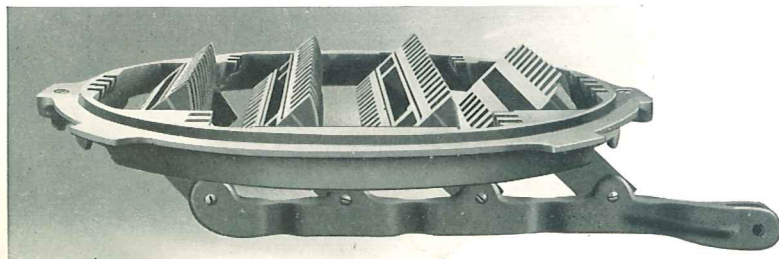
The Armstrong Furnace is equipped with a special grate that is adapted to burning many grades of coal. As the illustration shows, the grate is sturdily built, of few parts, and the bars are heavy and strong and easy to shake. As shown in cut, the bars are close enough for use of "fine" screen coal, but have large, reinforced air channels thru the middle to admit the air necessary for proper combustion and the "fingers" of the bars are extra heavy and reinforced to prevent warping and distortion. Each bar is easily "seated" or replaced. A simple movement of the lever dumps any obstruction and cleans the parts thoroly. This type of grate has been successfully used for a half century and has recently been adopted by the oldest and best known manufacturers in the furnace industry. A lock permits easy shaking or dumping movement when desired.



The ash pit is deep and smooth—affording plenty of clearance—with no "step-ups" or rivet heads to interfere with the removal of ashes.

This means a clean ash pit and long life to the grate. The grate's operation is made easy by an upright outside shaking lever. This is equipped with lock that pre-

vents dumping but provides for thoro shaking and cleaning. After dumping or shaking, pushing lever back to upright position levels the grate. Clinkers are easily broken up and disposed of in the Armstrong Furnace.

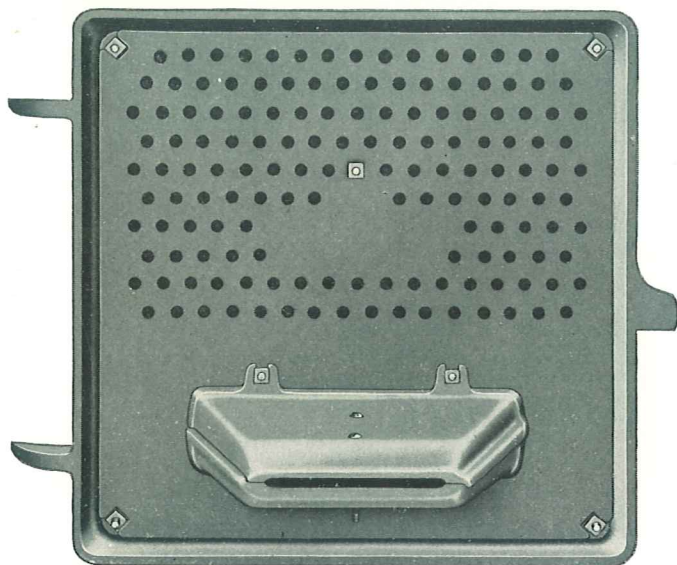




The Armstrong Feed Door and "Carburetor" or Smoke-Consumer

The Feed Door of the Armstrong Furnace is large, 13" x 13", and is provided with non-burn handle. It locks easily and securely over a beaded inner extension. When opened, a wide smoke curtain prevents a "back-fire" of gas and smoke. Built

into the door is the very efficient smoke consumer—the "watch-dog of the coal pile"—that converts smoke and gas into heat units by introducing a current of oxygen just as the coal releases its gases and oils. This extra heat then travels about 10 feet in contact with highly responsive metal and saves 30 to 40 per cent of the coal.



The feed throat is smooth—being cast in one piece and extending over the top of the brick. Extra heavy metal cleats clamp the top row of brick and hold them in a snug fit to the drum.

The feed opening is of a size to easily admit the largest lumps of coal or great chunks of wood.

Best for Oil or Gas

The Armstrong drum seams are both cold riveted and welded and are smoke, gas and fume tight. The indirect damper and long fire travel saves and utilizes much heat that ordinarily escapes up the chimney and makes them especially well adapted for burning oil or gas under pressure as well as coal.

The Armstrong Radiator

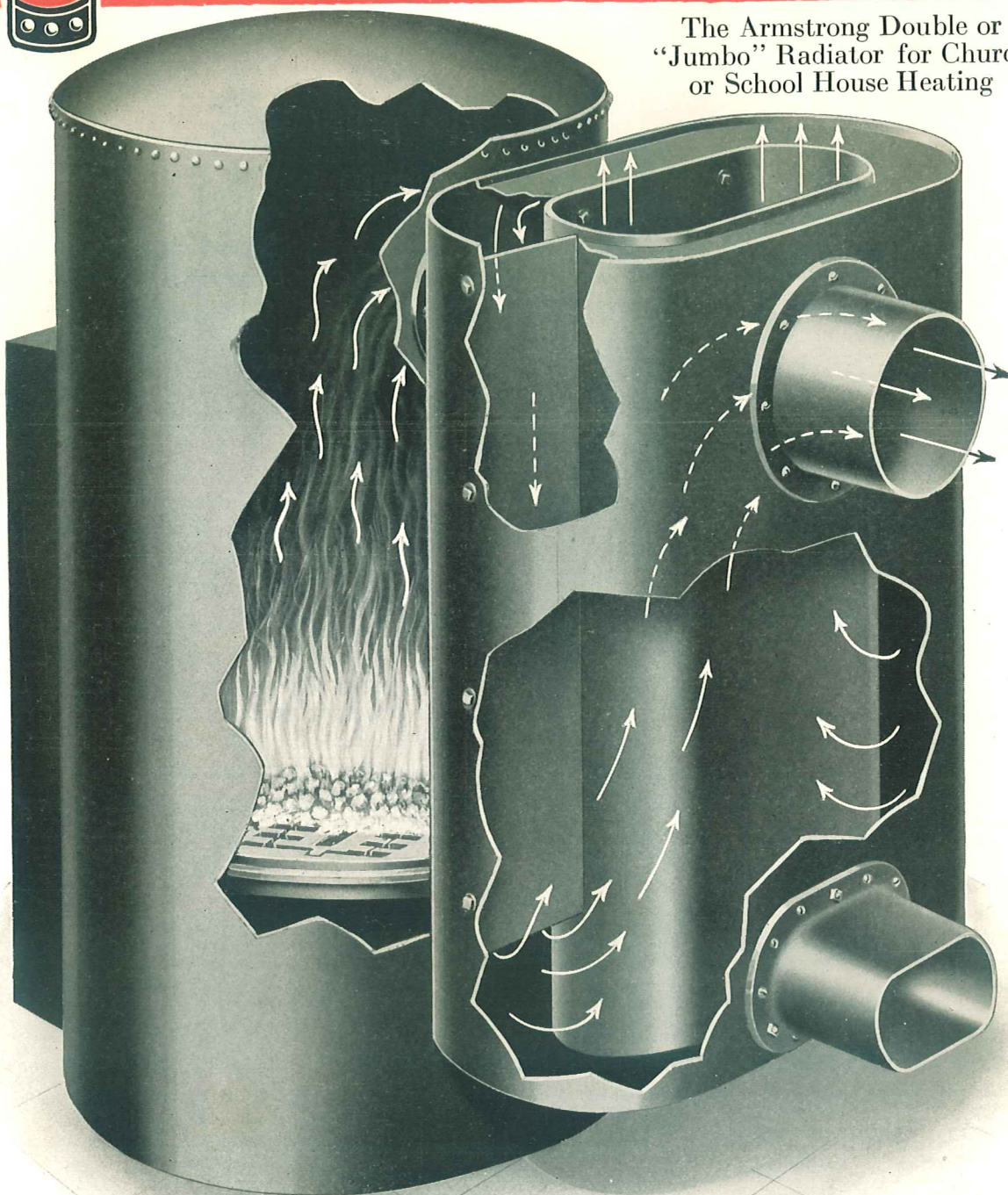
The Armstrong radiator is sturdy, of large capacity, long fire travel and positively gas and smoke tight. It is made of extra heavy "ARMCO IRON." The direct damper seats tightly and the arrangement of the heavy cast baffle plates provides maximum fire and smoke travel that thoroly saturates the sides with heat before escaping to the chimney. It is an extra reservoir of heat that declares constant dividends.

The radiator is kept perpendicular by a heavy adjustable bracket and has a large hinged clean-out door that makes it easy to clean all the inner surfaces.



ARMSTRONG GUARANTEED FURNACES

The Armstrong Double or "Jumbo" Radiator for Church or School House Heating



The ARMSTRONG "GIANT" for heating extra large buildings such as Churches, Schools, Theaters, Garages. The drum is extra large and the double oval radiator provides unusually long fire travel thru both sections. This and the

open center greatly increase the radiating capacity. The extra deep radiator hangs 12 inches above the floor and permits the use of a low, wide cold air boot that will immediately increase circulation thru the hollow center of radiator.

NOTE DIMENSIONS

| NO. | DIAM. OF DRUM | HEIGHT OF DRUM | HEIGHT OF RADIATOR | DIAM. OF CASING | CAPACITY IN SQ. INCHES | CAPACITY IN CUBIC FEET |
|------|---------------|----------------|--------------------|-----------------|------------------------|------------------------|
| 1034 | 34" | 64" | 48" | 70" | 1350 | 35 to 50,000 |

COPPER-BEARING WROUGHT STEEL



The Armstrong Pipeless Steel Furnace

For small compact homes with large, free openings—

Store rooms, churches or other buildings in which the cold and warm air can freely circulate thru one register. No round or wall pipes are required with this type of furnace.

They require the least room, use the least coal and can be installed with the least labor.

The duplex register is handsomely finished in Oxidized Copper and has extra large capacity.

SIZES AND CAPACITIES OF PIPELESS FURNACES

| NO. | DIAM. OF DRUM | DIAM. OUTER CASING | DIAM. INNER CASING | SIZE DUPLEX REGISTER | SIZE OF WARM AIR OUTLET | HEATING CAP. IN CUBIC FT. |
|-----|---------------|--------------------|--------------------|----------------------|-------------------------|---------------------------|
| 22P | 22" | 50" | 41" | 30x30 | 22" | 7 to 12,000 |
| 24P | 24" | 52" | 43" | 33x33 | 24" | 12 to 18,000 |
| 26P | 26" | 54" | 45" | 36x36 | 28" | 14 to 20,000 |
| 30P | 30" | 58" | 49" | 40x40 | 30" | 17 to 25,000 |
| 34P | 34" | 62" | 53" | 45x45 | 36" | 20 to 30,000 |

Armstrong "3-way" Furnace

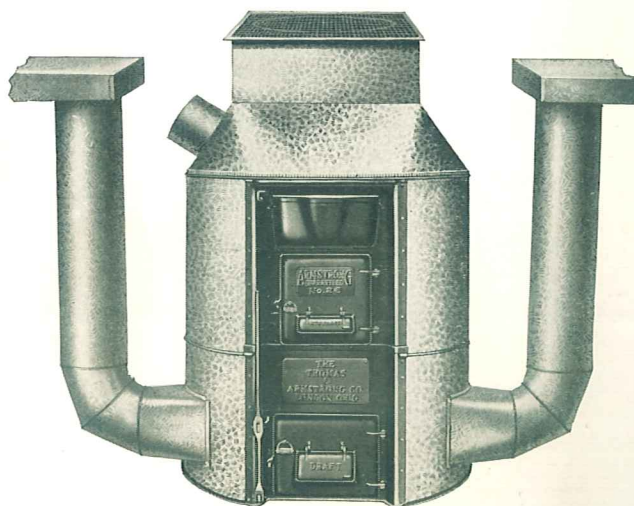
A really efficient heating plant without wall pipes.

Can be installed in small space, but will thoroly circulate the air without creating a draft of cold air over the floor.

The casing permits of extra pipes to bath or bed rooms.

The cold air supply can be taken from two or more rooms.

It is a combination of economy in space, efficiency and cost.



SPECIFICATIONS AND PRICE LIST FOR 3-WAY INSTALLATION

| FURNACE NO. | CAPACITY CUBIC FEET | SIZE OF WARM AIR REGISTER | SIZE OF COLD AIR REGISTER | SIZE COLD AIR PIPES | SIZE WARM AIR PIPES |
|-------------|---------------------|---------------------------|---------------------------|---------------------|---------------------|
| 22—3-Way | 9,000 to 13,000 | 22x24 | 2—16x20 | 2—16" | 1—22" |
| 24—3-Way | 12,000 to 18,000 | 26x28 | 2—18x20 | 2—18" | 1—26" |
| 26—3-Way | 14,000 to 24,000 | 28x30 | 2—20x22 | 2—20" | 1—28" |
| 30—3-Way | 23,000 to 33,000 | 30x30 | 2—22x24 | 2—22" | 1—30" |
| 34—3-Way | 35,000 to 45,000 | 36x40 | 2—26x28 | 2—26" | 1—36" |

Cold air pipe lines made 26 gauge galvanized steel consisting of 2 style E. Boots—2 45 degree elbows—2 Register Boxes—14 feet round pipe. Warm air register box to be double. All register faces oxidized copper plated. No smoke pipe furnished.

The Armstrong Guaranteed Furnace

Sizes and Capacities

| Number of Furnace | 220 | 240 | 260 | 300 | 340 | 1034 JUMBO |
|--|---------------|----------------|----------------|----------------|----------------|----------------|
| Diameter of Combustion Chamber | 22" | 24" | 26" | 30" | 34" | 34" |
| Diameter of Grate | 19" | 21" | 23" | 27" | 31" | 31" |
| Area of Grate | 1.97 | 2.40 | 2.88 | 3.97 | 5.25 | 5.25 |
| Height of Furnace | 56" | 56" | 56" | 56" | 56" | 64" |
| Height of Radiator | 36" | 36" | 36" | 36" | 36" | 48" |
| Diameter of Casing | 47" | 49" | 51" | 55" | 59" | 70" |
| Height of Casing | 68" | 68" | 68" | 68" | 68" | 76" |
| Diameter of Smoke Pipe | 9" | 9" | 9" | 9" | 9" | 10" |
| Ap. Ship. Wt., Furnace Only | 1044 | 1108 | 1164 | 1306 | 1410 | 1846 |
| Ap. Ship. Wt. Com. with Casing | 1157 | 1252 | 1319 | 1477 | 1593 | 2084 |
| Heating Capacity in Square Inches of Pipe Area | 450 | 575 | 700 | 850 | 1100 | 1350 |
| Heating Capacity in Cubic Feet | 8000 to 12000 | 10000 to 15000 | 12000 to 20000 | 20000 to 30000 | 30000 to 40000 | 35000 to 50000 |

CASING DIMENSIONS OF ARMSTRONG PIPE FURNACES

| NO. | LOWER SECTION | | UPPER SECTION | | BONNET |
|----------|---------------|------------|-------------------------|-----------------------|---------------|
| No. 220 | 126" long | 271½" high | 126½" long | 231½" high | 147½" Circum. |
| No. 240 | 131⅞" long | 271½" high | 132¾" long | 231½" high | 153" Circum. |
| No. 260 | 137⅝" long | 271½" high | 137⅝" long | 231½" high | 159⅛" Circum. |
| No. 300 | 152⅙" long | 271½" high | 152⅙" long | 231½" high | 172⅙" Circum. |
| No. 340 | 163⅞" long | 271½" high | 163⅞" long | 231½" high | 185¼" Circum. |
| No. 1034 | 196" long | 23¾" high | 196" long 251½" long | 36" high 91½" high | 220" Circum. |

DIMENSIONS OF PIPELESS CASINGS

| NO. | OUTER CASING | INNER CASING | CIRCUM. OF HOOD | | REGISTER SIZE |
|---------|---|------------------|-----------------|-------|---------------|
| | | | INNER | OUTER | |
| No. 22P | 136" x 23¾" high 136" x 271½" high | 111" x 36" high | 132" | 160" | 30x30 |
| No. 24P | 142⅜" x 23¾" high 142⅜" x 271½" high | 117" x 36" high | 138⅜" | 165⅞" | 33x33 |
| No. 26P | 148¾" x 23¾" high 148¾" x 271½" high | 123½" x 36" high | 144¾" | 171⅝" | 36x36 |
| No. 30P | 161½" x 23¾" high 161½" x 271½" high | 136½" x 36" high | 157½" | 185⅙" | 40x40 |
| No. 34P | 174" x 23¾" high 174" x 271½" high | 149" x 36" high | 170" | 197¾" | 45x45 |

The Armstrong Furnace Company
London, Ohio



WISE DEALERS INSTALL BY STANDARD CODE.
OUR GUARANTEE IS PREDICATED ON ITS USE.

